Interim Forest Management Plan

Property Identifiers

Property Name: Black Earth Creek Fishery Area; Mount Vernon Creek Fishery Area

Property Designation or Type: Fisheries Areas

DNR Property Codes: 270 (Black Earth Creek); 1710 (Mount Vernon Creek)

Forestry Property Codes: 1319 (Black Earth Creek); 1303 (Mount Vernon Creek)

Property Location - County: Dane County

Property Acreage: 407 acres (Black Earth Creek); 356 acres (Mount Vernon Creek)

Master Plan Date: 1982 for both properties

Property Manager: Fisheries Mgmt. – Dan Oele, Wildlife Mgmt. – Julie Widholm

Property Assessment

The following should be considered during the property assessment:

A. Ecological Landscape description and property context

Black Earth Creek Fishery Area is in the Western Coulees and Ridges Ecological Landscape. This ecological landscape is characterized by its lack of glacial features, highly eroded Driftless topography, extensive stream networks, and extensive forest cover relative to much of southern Wisconsin. Soils are mostly silt loams and sandy loams over dolomite and sandstone bedrock, and several large rivers, including the Mississippi, Wisconsin, Chippewa, and Black, flow through or border the ecological landscape. Historical vegetation consisted of southern hardwood forest, oak savanna, and prairie with other riparian habitats near the major rivers.

Mount Vernon Creek Fishery Area is in the Southwest Savanna Ecological Landscape. This ecological landscape is characterized by rolling topography, broader ridges, narrow river valleys, and forests that are typically associated with the steeper valley slopes. It is also considered part of the Driftless Area. Soils are variable from thin soils over bedrock, alluvial soils in valleys, or hilltops with deep silt loams which support agricultural crops. Historical vegetation consisted of tallgrass prairie and oak savanna with oak forest in some draws and steeper slopes.

For both ecological landscapes, flatter areas with richer soils in the valley bottoms and on the ridge tops have been cleared for agriculture. Likewise, agriculture is an important part of the economy in both ecological landscapes. Less than 4% of each ecological landscape is in public ownership.

The specific context for each property parallels the ecological landscapes where they are located. Mount Vernon Fishery Area is surrounded predominantly by agriculture and grassland with some forest – primarily along valley bottoms and steeper hillsides. Black Earth Creek Fishery Area is surrounded predominantly by forest with

agriculture or pasture on most valley bottoms and ridgetops.

Black Earth and Mount Vernon are both within approximately a 30-minute drive from Madison, which places them close to a high potential recreational user base.

B. General property description – management, adjacent land uses, topography, soils, etc.

Mount Vernon Creek Fishery Area encompasses 356 acres across 3 non-contiguous parcels along Mount Vernon Creek north and south of the unincorporated community of Mount Vernon. Of the 356 acres, 177 acres are forested and the balance is comprised of upland and lowland grass and brush habitat types.

Mount Vernon Creek is classified as a trout stream for its entire length and is what the property is known for in terms of outdoor recreation. About four of its almost eight miles are class 1 trout waters, with the remainder rated class 2. The class 1 portion of the stream has been elevated to Outstanding Resource Water (ORW) status, providing it with a higher level of protection. The remainder of the stream is classified as Exceptional Resource Waters (ERW) under the state's anti-degradation rules. Sources of polluted runoff threaten parts of this stream. Lowland-riparian marsh wetlands compliment the creek. A well-known spring sits on the northwestern parcel of the property.

Black Earth Creek Fishery Area encompasses 407 acres across 16 non-contiguous parcels primarily along the Black Earth Creek, but also on Garfoot and Vermont Creeks. Of the 407 acres, 153 acres are forested and the balance is comprised of upland and lowland grass and brush habitat types.

The Black Earth Creek Fishery Area follows both the north and south banks of Black Earth Creek, beginning west of Middleton and proceeding westward to east of Black Earth in Dane County. Access to the stream and adjacent lands are from US Hwy 14 and town roads and County Hwy KP. Multiple road accessible entry points are well marked with either yellow standards, signage, and where possible, parking areas.

Black Earth Creek is a class I trout stream and the fishery area parcels are a mix of a high-quality trout streams flowing within a wide green agricultural valley. The parcels typically mix stream stretches with adjoining riparian corridors that grade from a wet margin of jewelweed, aster, and reed canary grass into shrub, then sparse woodlot, then pasture or cultivated crop. The corridor alternates from open to partially canopied. There are small pockets of low lying sedge and wetland. The stream is a class 1 coldwater fishery characterized by high gradient, coarse substrates, with much meandering and pleasant riffle - pool sequences.

Recognized as a premier trout destination and regionally significant and unique resource, much attention has focused here. The history includes millpond removal to initially restore the stream, followed by intensive DNR habitat work to improve trout holding and production potential as well as public access and is an on-going process.

Small scale pine thinning has occurred at Black Earth Creek Fishery Area through educational tree felling activities. Twenty-three acres at Mount Vernon Creek Fishery Area were planted to an oak and hardwood species mix in 2007 through a Hardwood Forestry Fund grant. Large scale forest management has not occurred at either property in recent decades. Likewise, the lack of active forest management is resulting in the deterioration of forest stands through loss of vigor, increased susceptibility to insect and disease, increased susceptibility to wind throw and storm damage, and encroachment of

invasive species. In particular, red pine has pocket decline, and elm and black and red oaks are dying out in mature oak stands.

Both properties lie within the Driftless Area of Wisconsin. Topography at each property has flat valley and river bottoms, rolling hills, and steeper hills incised with dry washes and rocky out crops commonly associated with the area. Soils are primarily loams, silt loams, and sandy loams with small components of rocky complexes in the uplands and mucks or other alluvial wet areas in the lowlands. Adjacent land use is primarily agriculture where the terrain is flat or rolling with forest cover remaining on steeper slopes. There are also scattered small residential holdings neighboring each property. Additionally, Donald County Park is adjacent to one of the Mount Vernon Creek parcels, and Festge County Park is adjacent to one of the Black Earth Creek parcels.

C. **Current forest types, size classes and successional stages**

Black Earth Creek:
Bottomland hardwood: 128 acres, small saw log and pole size, year of origin between 1945 and 1970.
Red pine & white cedar: 13 acres, pole size, year of origin is 1958.
Central hardwoods & walnut: 9 acres, large and small saw log size class, year of origin between 1900 and 1920.

Mount Vernon Creek:
Oak: 102 acres, large saw log, year of origin between 1902 and 1926
Oak: 23 acres, seedlings and saplings, planted in 2007
Bottomland hardwoods: 21 acres, poles, year of origin is 1972
Central hardwoods: 17 acres, small saw logs and poles, year of origin is 1969
Pine: 14 acres, small saw logs and poles, year of origin is 1968

D. **NHI: Endangered, Threatened, Special Concern species, Species of Greatest Conservation Need (SGCN)**

In the general vicinity of Black Earth Creek Fishery Area there may be 6 special concern plants, 4 threatened plants, 1 special concern insect, 1 threatened insect, 2 endangered insects, 1 special concern amphibian, 3 special concern reptiles, 1 special concern mammal, 3 threatened mammals, and the site lies within the Rusty Patch Bumble Bee High Probability Zone.

In the general vicinity of Mount Vernon Creek Fishery Area there may be 1 special concern plant, 1 endangered plant, 1 endangered insect, 1 special concern bird, 1 threatened bird, and the site lies within the Rusty Patch Bumble Bee High Probability Zone.

An NHI review will be completed during the planning process for any management activities, and the District Ecologist will be consulted as needed.

Neither property is located within a Conservation Opportunity Area. Most of the species identified in the NHI database for these properties are also Species of Greatest Conservation Need (SGCN) within their respective ecological landscapes. Mt. Vernon Creek FA is within the Southwest Savanna Ecological Landscape, and Black Earth Creek FA is within the Western Ridges and Coulees Ecological Landscape. Proposed prairie and oak woodland restoration at Mt. Vernon Creek FA would benefit SGCN including grassland/shrubland/edge species (Field Sparrow, Grasshopper Sparrow, Woodcock,

Bobwhite Quail, Brown Thrasher) and savanna/oak woodland specialists (Red Headed Woodpecker, Whip-Poor-Will).

E. **Significant cultural or archeological features:**

The Department's Archaeological and Historical site map for Dane County indicates that Archaeological and/or historical Sites are present in the same quarter-quarter section where parts of these properties are located. The maps and Department Archaeologist will be consulted during planning for any ground disturbing activity.

F. **Invasive species**

Common upland invasive species including garlic mustard, bush honeysuckle, buckthorn, multiflora rose, autumn olive, and Japanese barberry are present in varying densities on both properties and in numerous stands.

Given the presence of invasive species, any regeneration harvesting or afforestation efforts will need to have projects to control invasive species until desirable tree seedlings are established and can out compete invasive species. Similarly, all timber harvesting will follow invasive species BMPs.

Aquatic Invasive Species:

New Zealand mudsnails (*Potamopyrgus antipodarum)* are present in Mount Vernon and Black Earth Creeks. The New Zealand mudsnail is an NR40 prohibited invasive species, meaning that it is absent from Wisconsin or found in only a few locations. The small snail can establish large populations that can outcompete native stream insects that serve as food for fish and change the nutrient flows in streams. However, it is uncertain what impacts this invasive species will have on streams in Wisconsin.Eurasian watermilfoil (*Myriophyllum spicatum*) and curly leaf pondweed (*Potamogeton crispus*) are also present in the watersheds.

G. Existing State Natural Areas (SNA) designations/natural community types limited in the landscape

No designated State Natural Areas occur on these properties. The Southernmost portion of Mt. Vernon Creek FA has been identified by DNR staff as an opportunity to manage for prairie and oak woodland restoration to benefit both rare and game species.

H. **Primary public uses (recreation)**

Both properties were established as a State Fisheries Areas to with the intent to provide public access to high quality trout streams and protect the associated riparian area. Black Earth and Mount Vernon Fisheries area also provide public hunting opportunities. Both areas are used for deer, turkey, and small game hunting.

I. **Biotic Inventory Status**

Formal Biotic Inventory was conducted on a group of properties, including Mt. Vernon Creek and Black Earth Creek Fishery Areas, from 2010 – 2012 ahead of the "Driftless Area Streams" master planning effort. That master planning effort has been abandoned by the Department. However, a full report on the Biotic Inventory results "Rapid Ecological Assessment for Driftless Area Study Streams: A Rapid Ecological Assessment

Focusing on Rare Plants, Selected Rare Animals, and High-quality Natural Communities – WDNR 2012" is available online at https://dnr.wi.gov/files/PDF/pubs/er/ER0836_ext.pdf

Site Specific Surveys Conducted (p. 12):
Black Earth Creek Fishery Area – No surveys conducted.
Mt. Vernon Creek Fishery Area – 2010: Natural Communities, Plants, and Breeding Bird Surveys. 2011: Terrestrial Insects.

J. **Deferral/consultation area designations**

None.

IFMP components

Management Objectives: (Outline primary forest management objectives):

1) Manage and maintain oak cover types where feasible.
2) Convert pine/cedar to hardwoods where appropriate, otherwise tend existing plantations and convert to hardwoods at rotation.
3) Manage central hardwoods and walnut for production of walnut and cherry sawtimber.
4) Manage for early successional forest types where appropriate.
5) Manage the Southernmost portion of Mount Vernon Creek FA for oak woodland and prairie native communities. Restore a continuum of native communities from prairie to oak woodland. Restore habitat to benefit rare plants, pollinators, savanna and grassland specialist birds, and game species including turkeys.

Property Prescriptions (Identify specific and pertinent prescriptions by area or forest type, including passive management areas, extended rotation, and other information that will help achieve the objectives)

OAK – Utilize even-aged silvicultural systems on 80-120 year rotation. Maintain and promote oak through planting, timber stand improvement, prescribed fire, thinning, seed tree, shelterwood, clearcut, and other techniques. Focus oak regeneration efforts on areas likely to have success, otherwise consider conversion to central hardwoods while maintaining an oak component. Implement projects to prepare stands for oak regeneration. Large healthy white and bur oak should be favored for retention throughout harvested stands as seed/mast-production and legacy trees.

CENTRAL HARDWOODS – Utilize both even and uneven-aged silvicultural systems including thinning, single tree/group selection, patch clearcut, and other methods. Grow walnut to achieve highest possible grade where possible. Favor oaks, black cherry, and shagbark hickory as mast bearing species for wildlife. Use coppice cutting on aspen pockets to promote and expand young forest habitat.

PINE/CEDAR – Use even-aged silvicultural systems including thinning and clearcut to manage pine and convert to oak or central hardwoods. Where appropriate, pine and cedar should be thinned until rotation age. If continued tending of pine and cedar stands is not feasible or desired, these stands should be converted to oak or central hardwoods.

WALNUT – Use timber stand improvement, thinning, single tree/group selection, and other techniques to produce high quality sawtimber.

BOTTOMLAND HARDWOODS – Use even-aged and uneven-aged silvicultural systems including group selection and irregular shelterwood to manage these stands. Exact prescriptions should be based on current site conditions and feasibility of regeneration.

ALL COVER TYPES – Use salvage harvesting when possible after insect/disease or storm damage events to capture value of merchantable damaged timber and to clean up areas for regeneration/afforestation projects.

Mt. Vernon Creek FA South Oak Woodland/Prairie Restoration Area – Restore and expand prairie and oak woodland natural communities using mechanical and chemical treatments and prescribed fire. Utilize timber harvests early in the restoration process to restore habitat structure and tree species composition and meet native community goals. Long term, use frequent prescribed fire as the primary management tool to restore ground layer composition, habitat structure, and ecological function; and to control invasive species at a large scale.

Summary of Public Involvement and Comments Received

Interim Forest Management Plan

PREPARED BY:

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Property Manager Date

APPROVED:

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Area Program Supervisor Date

REVIEWED BY:

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Forester Date

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District Ecologist Date